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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,866	08/20/2001	Samuel M. Cramer	112056-0004	6355

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EXAMINER	
MANOSKEY, JOSEPH D	

ART UNIT	PAPER NUMBER
2113	7

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/933,866	CRAMER ET AL.	
	Examiner	Art Unit	
	Joseph Manoskey	2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☒ Claim(s) *4,8,12 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 August 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5 and 6*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "154", "155", "158", "159", and "400" of Fig. 1. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "505" has been used to designate the last three blocks of the flowchart in Fig. 5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 4, 8, 12, and 21 objected to because of the following informalities:

Referring to claim 4, the claim recites "a second indication", this would suggest that there would be a first indication, however the claim makes no reference to a first indication.

Referring to claims 8 and 21, the claims recite "a first server to provide backup service to a second server", however the rest of the claim suggests that it should read, "a first server provided backup service by a second server".

Referring to claim 12, the claim recites "the first the first server", it is believed that the claim should read "the first server".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 5, 6, 9, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 5 recites the limitation "the status" in line 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 6 recites the limitation "the operational fault" in line 2. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 9 recites the limitation "the operational status" in line 2. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 16 recites the limitation "the status" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Kleiman et al., PCT International Application Publication WO 00/11553, hereinafter referred to as "Kleiman".

12. Referring to claim 20, Kleiman discloses an apparatus for operating a first and second server (See Fig. 1). Kleiman discloses the first server sending state information messages, which is interpreted as sending a first indication from the first server to the second server, that contains a "STOPPED" state when the server is not operational, which is interpreted as the a fault detected in the first server that requires shut down (See page 7, lines 17-18, and 28-29). Also the first server provides a status report to the other servers when recovering from an error, this is interpreted as the first server sending a second indication that provides the type of operational fault requiring shut

down (See page 2, lines 28-29). Kleiman also teaches the second server sending a "TAKEOVER" state message to the first server; this is interpreted as the first server receiving a shutdown command from the second server (See page 7, lines 14-15 and 28-29). Finally Kleiman discloses "REBOOTING", or shutting down the first server (See page 7, lines 20-21).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claim 1-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleiman in view of Pitt et al., U.S. Patent 5,717,934, hereinafter referred to as "Pitt".

15. Referring to claim 1, Kleiman discloses method for operating a cluster with a first and second server (See Fig. 1). Kleiman discloses the first server sending state information messages, which is interpreted as sending a first indication from the first server to the second server, that contains a "STOPPED" state when the server is not operational, which is interpreted as the a fault detected in the first server that requires shut down (See page 7, lines 17-18, and 28-29). Kleiman also teaches the second

server sending a "TAKEOVER" state message to the first server; this is interpreted as the first server receiving a second indication for shutdown from the second server (See page 7, lines 14-15 and 28-29). Finally Kleiman discloses "REBOOTING", or shutting down the first server (See page 7, lines 20-21). Kleiman does not teach letting the first server complete server requests that were being processed when the second indication was received but before the second server takes over, however Kleiman does disclose the desire to provide a reliable takeover among a plurality of file servers (See page 1, lines 30-31). Pitt teaches a method using a proper sequence shutdown system for network components including file servers (See Col. 1, lines 20-26). The method does not permit the system to shut down until data transactions that are currently in progress are completed (See Col. 1, line 54 to Col. 2, line 6). This is interpreted as having the file server complete service requests that are currently being processed at the time of the event that requires the server to shut down. It would be obvious to one of ordinary skill in the art at the time of the invention to combine the shutting down method of a file server in a network of Pitt with the method of transferring control from one file server to another of Kleiman. This would have been obvious to one of ordinary skill in the art at the time of the invention to do because the a proper shut down of the server is required to prevent data from being deleteriously affected and thus system reliability maintained (See Pitt, Col. 1, lines 62-65).

16. Referring to claim 2, Kleiman and Pitt teach all the limitations (See rejection of claim 1) including sending periodically sending a request from the second server to the

first server to stay shut down after it has already shut down. Kleiman discloses the file servers periodically sending state information messages and one of the states including a "TAKEOVER" state that signifies that the server has control of the mass storage devices normally assigned to the shut down server (See page 7, lines 14-15 and lines 28-29). This is interpreted as the second server using the takeover command to shut down a server and once it has shut down maintaining the message to keep the server shut down.

17. Referring to claim 3, Kleiman and Pitt disclose all the limitations (See rejection of claim 1) including the servers sending periodic signals to indicate they are function at some level and the second server immediately takes control of the first server in the absence of such signals. Kleiman teaches the servers sending state information messages periodically that indicate the functional level of the server (See page 7, lines 11-30). Kleiman also teaches a second server determines that a first server has failed or had a server interruption if it has not received any messages from a first server within a timeout period and then proceeds to issue the "TAKEOVER" state message (See page 11, lines 17-26).

18. Referring to claim 4, Kleiman discloses method for operating a cluster with a first and second server (See Fig. 1). Kleiman teaches the second server sending a "TAKEOVER" state message to the first server; this is interpreted as the first server receiving a second indication for shutdown from the second server (See page 7, lines

14-15 and 28-29). Finally Kleiman discloses "REBOOTING", or shutting down the first server (See page 7, lines 20-21). Kleiman does not teach letting the first server complete server requests that were being processed when the second indication was received but before the second server takes over, however Kleiman does disclose the desire to provide a reliable takeover among a plurality of file servers (See page 1, lines 30-31). Pitt teaches a method using a proper sequence shutdown system for network components including file servers (See Col. 1, lines 20-26). The method does not permit the system to shut down until data transactions that are currently in progress are completed (See Col. 1, line 54 to Col. 2, line 6). This is interpreted as having the file server complete service requests that are currently being processed at the time of the event that requires the server to shut down. It would be obvious to one of ordinary skill in the art at the time of the invention to combine the shutting down method of a file server in a network of Pitt with the method of transferring control from one file server to another of Kleiman. This would have been obvious to one of ordinary skill in the art at the time of the invention to do because the a proper shut down of the server is required to prevent data from being deleteriously affected and thus system reliability maintained (See Pitt, Col. 1, lines 62-65).

19. Referring to claim 5, Kleiman and Pitt teach all the limitations (See rejection of claim 1) including detecting any operational fault prior to sending the first indication to the second server in the event a fault as occurred. Kleiman discloses a "STOPPED" state that indicates a server is not operational and sending state messages periodically

to the other servers (See page 7, lines 17-18 and lines 28-29). This is interpreted as detecting a fault before sending a first indication to the second server.

20. Referring to claim 6, Kleiman and Pitt disclose all the limitations (See rejection of claim 1) including allowing the first server to complete certain functions at the time of the operational fault and before shut down. Pitt teaches a method using a proper sequence shutdown system for network components including file servers (See Col. 1, lines 20-26). The method does not permit the system to shut down until data transactions that are currently in progress are completed (See Col. 1, line 54 to Col. 2, line 6). This is interpreted as having the file server complete service requests or certain functions that are currently being processed at the time of the event that requires the server to shut down.

21. Referring to claim 7, Kleiman and Pitt teach all the limitations (See rejection of claim 6) including sending periodically sending a request from the second server to the first server to stay shut down after it has already shut down. Kleiman discloses the file servers periodically sending state information messages and one of the states including a "TAKEOVER" state that signifies that the server has control of the mass storage devices normally assigned to the shut down server (See page 7, lines 14-15 and lines 28-29). This is interpreted as the second server using the takeover command to shut down a server and once it has shut down maintaining the message to keep the server shut down.

22. Referring to claim 8, Kleiman discloses method for operating a first and second server (See Fig. 1). Kleiman discloses the first server sending state information messages, which is interpreted as receiving a first request from the first server to the second server, that contains a "STOPPED" state when the server is not operational, which is interpreted as the a fault detected in the first server that requires shut down (See page 7, lines 17-18, and 28-29). Finally Kleiman discloses "REBOOTING", or shutting down the first server (See page 7, lines 20-21). Kleiman also teaches the second server sending a "TAKEOVER" state message to the first server; this is interpreted as the second server taking over the functions of the first server (See page 7, lines 14-15 and 28-29). Kleiman does not teach letting the first server certain functions that were being processed at the time of the fault but before the shutdown, however Kleiman does disclose the desire to provide a reliable takeover among a plurality of file servers (See page 1, lines 30-31). Pitt teaches a method using a proper sequence shutdown system for network components including file servers (See Col. 1, lines 20-26). The method does not permit the system to shut down until data transactions that are currently in progress are completed (See Col. 1, line 54 to Col. 2, line 6). This is interpreted as having the file server complete service requests, or certain functions, that are currently being processed at the time of the event that requires the server to shut down. It would be obvious to one of ordinary skill in the art at the time of the invention to combine the shutting down method of a file server in a network of Pitt with the method of transferring control from one file server to another of Kleiman. This

would have been obvious to one of ordinary skill in the art at the time of the invention to do because the a proper shut down of the server is required to prevent data from being deleteriously affected and thus system reliability maintained (See Pitt, Col. 1, lines 62-65).

23. Referring to claim 9, Kleiman and Pitt teach all the limitations (See rejection of claim 8) including detecting any operational fault prior to sending the first request to the second server in the event a fault as occurred. Kleiman discloses a "STOPPED" state that indicates a server is not operational and sending state messages periodically to the other servers (See page 7, lines 17-18 and lines 28-29). This is interpreted as detecting a fault before sending a first request to the second server for initiating the second server to takeover.

24. Referring to claim 10, Kleiman and Pitt teach all the limitations (See rejection of claim 9) including determining if the second server can provide backup service for a first server and requesting the first server to shut down if the second server can provide backup service. Kleiman discloses a file server being able to disable a takeover of second server if there is any compatibility mismatch between the two; this is interpreted as the determining if a second server can provide backup service (See page 11, line 31 to page 12, line 2). Kleiman also teaches the second server sending a "TAKEOVER" state message to the first server; this is interpreted as the second server taking over the

functions of the first server and having the second server shut down (See page 7, lines 14-15 and 28-29).

25. Referring to claim 11, Kleiman and Pitt teach all the limitations (See rejection of claim 10) including the first server sending an indication to the second server indicating the type of fault detected. Kleiman discloses the first server providing a status report to the other servers when recovering from an error, this is interpreted as the first server sending a second indication that provides the type of operational fault requiring shut down (See page 2, lines 28-29).

26. Referring to claim 12, Kleiman and Pitt teach all the limitations (See rejection of claim 11) including sending periodically sending a request from the second server to the first server to stay shut down after it has already shut down. Kleiman discloses the file servers periodically sending state information messages and one of the states including a "TAKEOVER" state that signifies that the server has control of the mass storage devices normally assigned to the shut down server (See page 7, lines 14-15 and lines 28-29). This is interpreted as the second server using the takeover command to shut down a server and once it has shut down maintaining the message to keep the server shut down.

27. Referring to claim 13, Kleiman and Pitt teach all the limitations (See rejection of claim 12) including rebooting the first server detected fault has been fixed. Kleiman

discloses a rebooting state and the server recovering from the service interruption (See page 7, lines 20-21). This is interpreted as rebooting the server after the fault has been fixed.

28. Referring to claim 14, Kleiman discloses operating a cluster with a first and second server (See Fig. 1). Kleiman discloses the first server sending state information messages, which is interpreted as sending a first indication from the first server to the second server, that contains a "STOPPED" state when the server is not operational, which is interpreted as the a fault detected in the first server that requires shut down (See page 7, lines 17-18, and 28-29). Kleiman also teaches the second server sending a "TAKEOVER" state message to the first server; this is interpreted as the first server receiving a second indication for shutdown from the second server (See page 7, lines 14-15 and 28-29). Finally Kleiman discloses "REBOOTING", or shutting down the first server (See page 7, lines 20-21). Kleiman does not teach letting the first server complete server requests that were being processed when the second indication was received but before the second server takes over, however Kleiman does disclose the desire to provide a reliable takeover among a plurality of file servers (See page 1, lines 30-31). Pitt teaches a method using a proper sequence shutdown system for network components including file servers (See Col. 1, lines 20-26). The method does not permit the system to shut down until data transactions that are currently in progress are completed (See Col. 1, line 54 to Col. 2, line 6). This is interpreted as having the file server complete service requests that are currently being processed at the time of the

event that requires the server to shut down. It would be obvious to one of ordinary skill in the art at the time of the invention to combine the proper shut down a file server in a network of Pitt with the operation a cluster that allows the transfer of control from one file server to another of Kleiman. This would have been obvious to one of ordinary skill in the art at the time of the invention to do because the a proper shut down of the server is required to prevent data from being deleteriously affected and thus system reliability maintained (See Pitt, Col. 1, lines 62-65).

29. Referring to claim 15, Kleiman discloses operating a cluster with a first and second server (See Fig. 1). Kleiman discloses the first server sending state information messages, which is interpreted as sending a fault signal from the first server to the second server, that contains a "STOPPED" state when the server is not operational, which is interpreted as the a fault detected in the first server that requires shut down (See page 7, lines 17-18, and 28-29). Kleiman also teaches the second server sending a "TAKEOVER" state message to the first server; this is interpreted as the first server's operations being taken over by the second server (See page 7, lines 14-15 and 28-29). Kleiman does not teach letting the first server complete server requests that were being processed when the second indication was received but before the second server takes over, however Kleiman does disclose the desire to provide a reliable takeover among a plurality of file servers (See page 1, lines 30-31). Pitt teaches a method using a proper sequence shutdown system for network components including file servers (See Col. 1, lines 20-26). The method does not permit the system to shut down until data

transactions that are currently in progress are completed (See Col. 1, line 54 to Col. 2, line 6). This is interpreted as having the file server complete service requests that are currently being processed at the time of the event that requires the server to shut down. It would be obvious to one of ordinary skill in the art at the time of the invention to combine the proper shut down a file server in a network of Pitt with the operation a cluster that allows the transfer of control from one file server to another of Kleiman. This would have been obvious to one of ordinary skill in the art at the time of the invention to do because the a proper shut down of the server is required to prevent data from being deleteriously affected and thus system reliability maintained (See Pitt, Col. 1, lines 62-65).

30. Referring to claim 16, Kleiman and Pitt disclose all the limitations (See rejection of claim 15) including the first server status of requests sent to the second server to be stored in memory in the event the second server takes over operation of the first server. Kleiman teaches the servers maintain states in persistent memory and using shared resources as part of the redundant communication paths (See page 2, lines 18-26). This is interpreted as the first server sending status of requests to the second server for storage in the event the second server needs to take over.

31. Referring to claim 17, Kleiman and Pitt teach all the limitations (See rejection of claim 16) including the second server taking over operation and sending periodic requests for first server to stay dead. Kleiman discloses the file servers periodically

sending state information messages and one of the states including a "TAKEOVER" state that signifies that the server has control of the mass storage devices normally assigned to the shut down server (See page 7, lines 14-15 and lines 28-29). This is interpreted as the second server using the takeover command to shut down a server and once it has shut down maintaining the message to keep the server dead.

32. Referring to claim 18, Kleiman and Pitt teach all the limitations (See rejection of claim 16) including the servers being file servers (See Kleiman, page 2, lines 8-9).

33. Referring to claim 19, Kleiman discloses operating a cluster with a first and second server (See Fig. 1) that includes memory of containing running executable instructions. Kleiman discloses the first server sending state information messages, which is interpreted as sending a fault signal from the first server to the second server, that contains a "STOPPED" state when the server is not operational, which is interpreted as the a fault detected in the first server that requires shut down (See page 7, lines 17-18, and 28-29). Kleiman discloses a file server being able to disable a takeover of second server if there is any compatibility mismatch between the two; this is interpreted as the determining if a second server can provide backup service (See page 11, line 31 to page 12, line 2). Kleiman also teaches the second server sending a "TAKEOVER" state message to the first server; this is interpreted as first server shutting down if the second server can provide backup service (See page 7, lines 14-15 and 28-29). Finally Kleiman discloses "REBOOTING", or shutting down the first server (See

page 7, lines 20-21). Kleiman does not teach letting the first server complete server requests that were being processed when the second indication was received but before the second server takes over, however Kleiman does disclose the desire to provide a reliable takeover among a plurality of file servers (See page 1, lines 30-31). Pitt teaches a method using a proper sequence shutdown system for network components including file servers (See Col. 1, lines 20-26). The method does not permit the system to shut down until data transactions that are currently in progress are completed (See Col. 1, line 54 to Col. 2, line 6). This is interpreted as having the file server complete service requests that are currently being processed at the time of the event that requires the server to shut down. It would be obvious to one of ordinary skill in the art at the time of the invention to combine the shutting down method of a file server in a network of Pitt with the method of transferring control from one file server to another of Kleiman. This would have been obvious to one of ordinary skill in the art at the time of the invention to do because the a proper shut down of the server is required to prevent data from being deleteriously affected and thus system reliability maintained (See Pitt, Col. 1, lines 62-65).

34. Referring to claim 21, Kleiman discloses an apparatus for operating a cluster with a first and second server (See Fig. 1). Kleiman discloses the first server sending state information messages, which is interpreted as sending a first request from the first server to the second server, that contains a "STOPPED" state when the server is not operational, which is interpreted as the a fault detected in the first server that requires

shut down (See page 7, lines 17-18, and 28-29). Kleiman also teaches the second server sending a "TAKEOVER" state message to the first server; this is interpreted as the first server receiving a second indication for shutdown from the second server (See page 7, lines 14-15 and 28-29). Finally Kleiman discloses "REBOOTING", or shutting down the first server (See page 7, lines 20-21). Kleiman does not teach letting the first server complete server requests that were being processed when the second indication was received but before the second server takes over, however Kleiman does disclose the desire to provide a reliable takeover among a plurality of file servers (See page 1, lines 30-31). Pitt teaches a method using a proper sequence shutdown system for network components including file servers (See Col. 1, lines 20-26). The method does not permit the system to shut down until data transactions that are currently in progress are completed (See Col. 1, line 54 to Col. 2, line 6). This is interpreted as having the file server complete service requests that are currently being processed at the time of the event that requires the server to shut down. It would be obvious to one of ordinary skill in the art at the time of the invention to combine the proper shut down a file server in a network of Pitt with the apparatus for the operation a cluster that allows the transfer of control from one file server to another of Kleiman. This would have been obvious to one of ordinary skill in the art at the time of the invention to do because the a proper shut down of the server is required to prevent data from being deleteriously affected and thus system reliability maintained (See Pitt, Col. 1, lines 62-65).

Conclusion

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following are examples of other failover systems.

U.S. Patent 5,812,748 to Ohran et al.

U.S. Patent 5,812,751 to Ekrot et al.

U.S. Patent 5,987,621 to Duso et al.

U.S. Patent 6,560,617 to Winger et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Manoskey whose telephone number is (703) 308-5466. The examiner can normally be reached on Mon.-Fri. (8am to 4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JDM

April 16, 2004

ROBERT BEAUSOLIEL
SUPER[illegible] EXAMINER
TECH[illegible] 2100